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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IX

In The Matter Of:	
The J.H. Baxter Superfund Site Weed, California	
J.H. Baxter and Company International Paper, Inc. Roseburg Forest Products Co. Beazer East, Inc.	U.S. EPA
Respondents	Docket No. 99-03
Proceeding Under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9606(a))	

ADMINISTRATIVE ORDER

FOR REMEDIAL DESIGN AND REMEDIAL ACTION

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ADMINISTRATIVE ORDER

FOR REMEDIAL DESIGN AND REMEDIAL ACTION

I. INTRODUCTION AND JURISDICTION

1. This Order directs the Respondents to perform a remedial design for the remedy described in the Record of Decision for the J.H. Baxter Superfund Site, dated September 25, 1990, as amended by Amendment #1 to the Record of Decision, dated March 27, 1998, and to implement the design by performing a remedial action. This Order is issued to the Respondents by the United States Environmental Protection Agency ("EPA") under the authority vested in the President of the United States by section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987). This authority was further delegated to EPA Regional Administrators on September 13, 1987 by EPA Delegation No. 14-14-B, and was further delegated to the Director, Superfund Division, by

the corresponding Region IX delegation dated September 29, 1997.

II. FINDINGS OF FACT

2. General Site Description

A. The J.H. Baxter Superfund Site (the "Site") is located on the northeastern border of the city of Weed in Siskiyou County, California. The Site includes approximately 33 acres owned by J.H. Baxter and Company ("Baxter"), portions of approximately 1000 acres of property owned by Roseburg Forest Products Company ("Roseburg")adjacent to the Baxter parcel and areas where hazardous substances from these properties have come to be located, including groundwater, sediment and surface water bodies. (See Appendix 4) The Site is bordered on the west and northwest by residential areas of Weed (including Siskiyou High School), to the north by the Angel Valley subdivision and Lincoln Park, to the east by mixed woodlands, and to the south by irrigated pasture. Beaughton Creek runs through the eastern portion of the Site.

B. Baxter currently operates a wood treatment plant on its property, and Roseburg currently operates a lumber mill and veneer plant on its property at the Site.

C. Releases from the Baxter facility and the Roseburg facility have resulted in groundwater, soil, sediment and surface water contamination at the Site. Waste disposal, handling and discharge practices from wood treatment and other operations, which have occurred at the site since the mid 1930's, have resulted in the contamination.

D. The primary contaminants of concern at the Site are

arsenic, carcinogenic polycyclic hydrocarbons (PAHs), pentachlorophenol ("PCP"), and dioxins. All of these contaminants are known or suspected carcinogens and are present in soil, groundwater and surface water at concentrations exceeding health-based standards. Chromium, copper, zinc, benzene and non-carcinogenic PAHs are also present at the Site.

3. Respondents

A. Respondent J.H. Baxter and Company ("J.H. Baxter"), a California limited partnership, is the current owner and operator of the wood treatment plant and its numerous structures and surrounding property at the Site. J.H. Baxter is the successor to J.H. Baxter and Company, an S Corporation which owned and operated the wood treatment plant and its associated structures and surrounding property beginning on or about 1962. In September 1994, J.H. Baxter and Company was restructured from an S corporation to a limited partnership. During the time that J.H. Baxter and its predecessor S corporation owned and operated the wood treatment plant and its associated structures and surrounding property, hazardous substances, including some or all of those described in Section II, Paragraph 2.D above, were disposed of at the Site.

B. Respondent Roseburg Forest Products Company ("Roseburg")is now and has been since approximately 1983 the owner and operator of the lumber operations and of the excavation, Area B, the french drain and other contaminated property included in the Site. During this time, hazardous substances, including some or all of those described in Section II, Paragraph 2.D above, were disposed of at the Site.

C. Respondent International Paper, Inc. ("International Paper") is the successor to Long Bell Lumber Company, which owned the Site beginning in the mid-1920's until it was merged into International Paper in 1956. Long Bell Lumber Company conducted lumber milling operations on the Site from the 1920s to 1956. In approximately 1937, Long Bell Lumber Company leased a portion of the property to American Lumber and Treating Company ("ALTC"). In 1937, ALTC constructed the wood treatment plant on the property and operated the wood treatment plant from 1937 until approximately 1947 when it sold the facility to Long Bell Lumber Company. From approximately 1947 until 1956, Long Bell Lumber Company operated the wood treatment plant in addition to conducting logging and milling operations at the Site. In 1956, Long Bell Lumber Company was merged into International Paper, which continued to operate the entire facility until approximately 1962. In 1962, International Paper sold the wood treatment plant and its associated structures and surrounding property to J.H. Baxter and Company. International Paper continued to own and operate the lumber operation on the adjacent property until it sold this property to Roseburg Forest Products Company on or about 1983. During the time that the wood treatment plant, its associated facilities and the surrounding property were owned and/or operated by Long Bell Lumber Company and by its successor, International Paper, hazardous substances, including some or all of those described in Section II, Paragraph 2.D above, were disposed of at the Site.

D. Respondent Beazer East, Inc. ("Beazer"), is the successor to ALTC, which constructed the wood treatment plant and conducted wood treating operations at the Site from 1937 to approximately 1947. In 1954, Koppers Company, Inc., acquired and liquidated ALTC and assumed all the liabilities of ALTC. As of June 10, 1988, BNS Acquisitions, Inc. ("BNS Acquisitions"), a Delaware corporation and

an indirect wholly owned subsidiary of Beazer PLC, had acquired indirectly more than ninety percent of the common stock of Koppers Company, Inc. On November 14, 1988, BNS acquisitions acquired indirectly the balance of the common shares. On January 20, 1989, BNS Acquisitions merged into Koppers Company, Inc., and on January 26, 1989, the name of Koppers Company, Inc., was changed to Beazer Materials and Services, Inc. On April 16, 1990, the name of Beazer Materials and Services, Inc., was changed to Beazer East, Inc. In Aluminum Company of America vs. Beazer East Inc., 124 F.3d. 551 (1997), the Court held that Beazer East, Inc. succeeded to ALTC's CERCLA liabilities and is liable as an owner/operator of its wood treatment facilities. During the time (1937 through approximately 1947) that the wood treatment plant was operated by Beazer's predecessor, ALTC, hazardous substances, including some or all of those described in Section II, Paragraph 2.D above, were disposed of at the Site.

4. History of Site Investigations

A. Investigations of waste disposal practices at the Site by state agencies and/or EPA began in 1982. In March 1982, the North Coast Regional Water Quality Control Board ("NCRWQCB") inspected J.H. Baxter and requested reports of waste discharges. In November 1982, the California Department of Health Services ("DHS") inspected J.H. Baxter and reported improper handling and storage of wastes. In March 1983, DHS and NCRWQCB discovered elevated levels of arsenic, creosote and pentachlorophenol in Site soils, surface water runoff, and groundwater. Additional soil samples collected in nearby Lincoln Park also showed elevated arsenic. As a result of these investigations, the NCRWQCB issued a Cleanup and Abatement Order to J.H. Baxter to cease its waste disposal practices.

B. EPA proposed the Site for the National Priorities List ("NPL") in October 1984.

C. In January 1986, the Site was formally included on California's Priority Ranking List. At this time, EPA, at the request of DHS, became the lead agency for CERCLA response.

D. DHS filed a complaint in San Mateo County Superior Court on February 27, 1986 against J.H. Baxter alleging numerous violations of the California Hazardous Waste Control Act, including violations of requirements regarding the storage, disposal and transportation of hazardous wastes. A Consent Judgement was entered on September 7, 1990, in which J.H. Baxter agreed to pay a total of $310,000 to DHS.

E. In September 1986, EPA negotiations with Respondents J.H. Baxter and Company, International Paper, and Roseburg Forest Products to perform the Remedial Investigation and Feasibility Study ("RI/FS") ended without settlement.

F. EPA funded and performed the RI in March 1987 and released the RI report in January 1989.

G. On October 4, 1989 (54 Fed. Reg. 41000), pursuant to section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the J.H. Baxter Superfund Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B.

H. EPA's released its draft Feasibility Study and Proposed Plan in April 1990.

I. The decision by EPA on the remedial action to be

implemented at the Site is embodied in the final Record of Decision ("ROD") executed on September 25, 1990, on which the State of California gave its concurrence. The Record of Decision is attached to this Order as Appendix 1 and is incorporated by reference.

J. On February 15, 1991, EPA issued special notice letters, pursuant to Section 122(e) of CERCLA to Respondents J.H. Baxter and Company, International Paper, Roseburg Forest Products, ALCOA, CBI and Beazer East, Inc., providing them with the opportunity to perform or finance the remedial action selected in the ROD.

K. Respondents J.H. Baxter and Company, International Paper and Roseburg Forest Products made a "good faith" offer, and EPA conducted negotiations with these parties for the performance of the remedial action. NCRWQCB and DHS participated in these negotiations.

L. Respondents Beazer, CBI and ALCOA failed to make a "good faith" offer in response to EPA's special notice letter. However, in response to EPA's stated intention to take further enforcement action, these Respondents joined the negotiation parties in their proposal to perform the remedial action. The negotiations failed to result in a settlement.

M. On August 19, 1991, EPA Region IX's Director, Hazardous Waste Management Division, issued a Unilateral Administrative Order (the "1991 UAO") for the performance of the remedial design and the remedial action for the Site.

N. From 1983 through 1994, the NCRWQCB issued a series of Cease and Desist Orders, Cleanup and Abatement Orders, and Waste Discharge Requirement Orders to J.H. Baxter, Roseburg Forest

Products and International Paper to address discharges of wood treatment chemicals occurring at the Site. NCRWQCB Waste Discharge Requirement Order No. 93-88 and Cease and Desist Order 93-87 currently require the best practicable treatment of ground and surface water discharged to Beaughton Creek, authorize such discharges only as a last and least favored disposal method, and require that the discharges be eliminated over time.

O. Studies undertaken to design the remedy selected in the 1990 ROD resulted in a significant increase in the understanding and in the estimated volume of Dense Non-Aqueous Phase Liquids (DNAPLs) in soil at the Site. This additional information, together with questions concerning the potential effectiveness of the chosen remedy for the DNAPL-impacted area (the "DNAPL zone"), caused EPA to undertake a Focused Feasibility Study ("FFS") in 1996-97 to reevaluate the cleanup requirements for groundwater and soils contaminated with DNAPLs. The FFS was issued in May 1997. On the basis of the FFS, EPA concluded that it is technically impracticable to achieve the 1990 ROD cleanup standards for groundwater within the DNAPL zone. EPA also evaluated a number of additional modifications to the remedy both within and outside the DNAPL zone. EPA's Proposed Plan for modifications to the groundwater and soils remedy was released in September 1997, and the public comment period on the Proposed Plan was held from September 29, 1998 to November 29, 1998.

P. The decision by EPA on the revised remedial action to be implemented at the Site is embodied in a Amendment #1 to the Record of Decision (the "ROD Amendment") dated March 27, 1998, on which the State of California has given its concurrence. The ROD Amendment is attached to this Order as Appendix 2 and is incorporated by reference. The ROD Amendment is supported by an

administrative record that contains the documents and information upon which EPA based the selection of the revised response action.

5. Site Releases

A. The primary contaminants of concern at the Site are arsenic, carcinogenic polycyclic hydrocarbons (PAHs), pentachlorophenol ("PCP"), and dioxins. All of these contaminants are known or suspected carcinogens and are present in soil, groundwater and surface water at concentrations exceeding health-based standards. Chromium, copper, zinc, benzene and non-carcinogenic PAHs are also present at the Site.

B. Groundwater sampling and analysis results revealed the presence of a contamination plume, originating at the Baxter Wood treatment area and extending to the northwest into the Roseburg property toward the Angel Valley subdivision. (See Figure 1-3 of ROD Amendment) Arsenic at 1740 ppb and creosote compounds at 233,000 ppb were detected in Roseburg's monitor well RMW1, which is located 1600 feet upgradient of the subdivision.

C. There is widespread arsenic contamination (40 to 38,500 ppm) in the surface soils of the Roseburg & Baxter properties. Surface soils on the site are also contaminated with up to 10,384 ppm creosote and up to 2,440 ppm pentachlorophenol. Organic contamination below the tank berm, retort, and wastewater vault areas extends to at least 30 feet below ground surface. Investigations found a subsurface creosote body (DNAPL) under the Baxter and portions of the Roseburg properties. The extent of the DNAPL in the saturated zone is depicted in Figure 2-2.

D. J.H. Baxter has applied the following preservatives to

wood using pressurized cylinders at the Site: ammoniacal copper-zinc-arsenate ("ACZA"), creosote 50/50 (a 50:50 petroleum creosote mixture), D-blaze, and pyresote. J.H. Baxter has used pyresote as a flame retardant, which is a mixture of zinc chloride, sodium dichromate, ammonium sulfate, and boric acid.

E. International Paper used similar processes and chemicals including, creosote, pentachlorophenol and inorganic arsenicals or salts and fire retardants containing varying amounts of chromium, copper, arsenic and zinc during its operation of the wood treatment plant at the Site. It is believed that American Lumber and Treating Company (predecessor to Beazer) used creosote and other similar chemicals and processes to those used by International Paper.

F. The areas depicted in Figure 1-3 of the ROD Amendment and discussed below are believed to be some of the historical sources of contamination at the Site:

i. Tank Berm Area Around the 500,000 gallon (No. 3) Tank - During American Lumber Treatment Company's operation of the wood treatment plant, a 500,000-gallon tank was installed to store creosote on what is now the Baxter parcel. Former International Paper employees have reported that there were spills from this tank which were allowed to seep into the ground during the 1940s and 1950s. Baxter converted the tank to a process water surge tank in 1983. The bermed area was reported to have received water from process waste water vaults and process water after 1983. The bermed area was reported to have been used for disposal of sludges from storage and process tanks from 1936 to 1983. Baxter removed the sludges from the bermed area in 1985; however, contaminated soils remain.

ii. Retort and Process Area - Several leaks and direct discharges of wood treatment chemicals from the process area onto the western portion of the Baxter property have been reported during the 1940s through 1970s. Also, an underground tank existed below the retorts, which at one time received used treatment solutions. This underground tank was reported to have been filled with groundwater before it was closed.

iii. Buried Pond Area - Unlined settling ponds and pits containing wood treatment salts and dip ponds containing creosote were reported to have been present at the north end of the wood treatment property near the Roseburg Excavation in the 1950s. These ponds and pits received excess treatment chemicals from the retorts and were used by local residents to dip fence posts. It is thought that these unlined ponds and pits have probably contributed to the presence of creosote observed within the Roseburg Excavation.

iv. Former Oil/Water Separator/Creosote Pit Area - An oil/water separator was installed at the Baxter property in 1955 to recover creosote product. Discharges and oil spills from the unit were reported as well as a leak in the inlet pipe. The oil/water separator was taken out of service in 1984.

v. Former Log Pond - During the 1960s, Baxter plant's sewage system and wastewater from the retorts drained into IP's log ponds located on what is now called the Roseburg property.

vi. Former Waste Water Vaults - Between 1975 and 1984/85, two concrete-line vaults were used to hold wastewater from oil and water-based chemical solutions, condenser water, cooling water, spillage drainage, wash water from retorts and runoff.

From 1975 to 1983, water entering the wastewater vaults was piped to irrigation sprinklers and sprayed on to an open field adjacent to the southern edge of the facility. Excess water was discharged into Site culverts, into the tank berm area, and directly onto the ground surface when the capacity of the spray system was exceeded.

vii. The process of transferring wood treatment related chemicals from rail tank cars to facility storage vessels was also reported as a source of spills at the Site. There are reports of spills during unloading during the 1950s. There are also reports of leaks from failing transfer hoses and the loss of creosote from a tank car.

viii. Area B soils are contaminated with organics and are believed to have been excavated from the DNAPL zone and moved to their current location on the Roseburg property when Roseburg began preparations for new building construction between 1983 and 1985.

6. Summary of Site Risks

A. The exposure pathways of concern are direct contact by workers at the Baxter facility with contaminated soil, inhalation of fugitive dust emissions on and off Site, direct contact with surface water and sediments, and ingestion of contaminated groundwater.

B. EPA's risk assessment evaluated two main baseline scenarios: continued use of the property as industrial and future development of the property as residential.

C. The highest industrial-use carcinogenic risk was identified as worker exposure to arsenic, PAH's and dioxin through direct contact with contaminated soil. This risk was determined to be 8×10^{-2} (Plausible Maximum Case risk). Total maximum risk to Site workers from all contaminants and pathways is 1.4×10^{-1}. For known or suspected carcinogens, acceptable exposure levels are generally those concentrations that represent an upper bound lifetime cancer risk to an individual of between 1×10^{-4} and 1×10^{-6}. Consequently, Site contaminants pose an unacceptable carcinogenic risk to human health under current land use conditions.

D. For systemic toxicants, acceptable exposure levels represent concentration levels to which human populations, including sensitive subgroups, may be exposed without causing deleterious effects. This is generally interpreted as a level which will not exceed a Hazard Index of one. The maximum non-carcinogenic risk from direct contact with soil by workers at the Baxter facility exceeds a Hazard Index of one. Consequently, Site contaminants pose an unacceptable non-carcinogenic risk to human health under current land use conditions.

E. Higher health risks are associated with future residential use of the Site. For example, although the contaminated groundwater beneath the Site is not currently used for drinking water, it is nevertheless classified as a potential source of drinking water by the State of California. The maximum carcinogenic risk from ingestion of the contaminated groundwater is 8×10^{-1} for adults and 5×10^{-1} for children. The corresponding non-carcinogenic risk exceeds a Hazard Index of one. The total maximum carcinogenic risk from all contaminants and pathways under a residential scenario is 8.6×10^{-1} for adults and 6×10^{-1} for children, and the

corresponding non-carcinogenic risk exceeds a Hazard Index of one.

F. The Record of Decision for the J.H. Baxter Site (September 25, 1990), as amended by Amendment #1 to the Record of Decision (the "ROD Amendment") dated March 27, 1998, addresses the risks posed by actual or threatened releases at the Site by requiring excavation and treatment of contaminated soils and sediments and requiring pumping and treatment of contaminated groundwater. The major components of the revised response action include:

- Enhancement of the groundwater remedy described in the 1990 ROD by construction and maintenance of a slurry wall around the DNAPL zone. The slurry wall is a physical barrier that will prevent further groundwater contamination and facilitate faster cleanup of the groundwater outside the DNAPL zone. Groundwater outside the DNAPL zone will be restored to Aquifer Cleanup Standards set forth in Table 4-2 of the ROD Amendment by extracting and treating this groundwater. Groundwater cleanup standards within the DNAPL zone have been waived based on the conclusion that achievement of these standards is technically impracticable from an engineering perspective.

- Excavation of soils contaminated with inorganics that exceed the ROD Amendment Subsurface Soil Excavation Standards (Table 4-2) and treatment of these soils by means of fixation to the Treatment Standards set forth in the ROD Amendment (Table 4-2) and disposal of soil meeting treatment standards in the onsite RCRA-equivalent disposal cell. Soils that already meet the treatment standards may be placed in the onsite RCRA cell without further treatment.

- Regrade and cover with an asphalt concrete wearing surface all

soils contaminated with inorganics that exceed the ROD Amendment Surface Soil Excavation Standard.

- Biotreatment of soils contaminated with organics that exceed the ROD Amendment Subsurface Soil Excavation Standards set forth in the ROD Amendment (Table 4-2) and dispose of them in the onsite RCRA Equivalent disposal cell. Soils that already meet the treatment standards may be excavated and placed in the onsite RCRA Cell without further treatment. Biotreated soils that meet the treatment standards set forth in Table 4-2 of the ROD Amendment will be excavated and placed in a lined RCRA-equivalent disposal cell.

- Regrading and covering of the open excavation on the Roseburg property to improve surface drainage, reduce contamination of surface water runoff, and reduce the potential for worker exposure to contaminated soils.

- Collection and treatment of liquids from DNAPL seeps in the Roseburg excavation.

- Implementation of institutional controls to restrict the use of the property to industrial use and prohibit residential uses, prevent exposure to contaminated groundwater and to waste left in place in the DNAPL zone and to protect the integrity of the remedy.

- Addition of the option of direct discharge of treated water to Beaughton Creek based on NCRWQCB regulatory actions requiring best practicable treatment. The preferred disposal option continues to be reuse on Roseburg log decks as described in the 1990 ROD.

- Modification of the leachate test to verify that soils to be placed in lined disposal cells (equivalent to Resource and Recovery Act [RCRA] disposal cells) comply with the soils treatment standard. Because testing has shown that Site soils are not acidic, deionized water, which is neutral, will be used instead of acid. Deionized water is more representative of Site conditions. Additionally, as this modification will apply only to soils placed in the RCRA-equivalent disposal cell, there is no increased risk to humans or groundwater.

- Treatment of Area B soils by bioventing to the Area B treatment standards set forth in Table 4-2 of the ROD Amendment. Treated B soils will be covered by two feet of clean soil to prevent human exposure and must meet the treatment standards selected by EPA based on groundwater protection concerns. EPA will evaluate in situ bioventing as the treatment technology for Area B soils. EPA will also evaluate the results of modeling and/or other studies to assess the impact of contaminated soils on groundwater in order to ensure that the cleanup levels achieved by bioventing will be protective of groundwater. If EPA concludes that the cleanup levels achieved by bioventing will be protective of groundwater, then Area B soils will be left in place after treatment has been completed. If EPA concludes that the cleanup levels achieved by bioventing will not be protective of groundwater, then the remedy will be biotreatment and subsequent disposal in a RCRA-equivalent disposal cell.

- EPA has designated three features of the Remedy as RCRA Corrective Action Management Units: the RCRA-equivalent disposal cell, the soil staging and fixation area, and the

slurry wall construction zone. The CAMUs must comply with the standards and requirements specified in the ROD Amendment. All soils that have been excavated and treated and all soils that have undergone in situ biotreatment (other than successful bioventing) will be disposed of in a RCRA-equivalent disposal cell that complies with the RCRA landfill requirements, including groundwater monitoring, leachate control, and closure requirements. Because of the CAMU designation, neither placement of remediation wastes into the RCRA-equivalent disposal cell, nor temporary placement of soils in the soil staging and fixation area or slurry wall construction zone, nor incorporation of contaminated soils into the slurry wall trench will constitute land disposal of hazardous wastes.

- Contaminated sediments within drainage ditches discharging Site runoff into Beaughton Creek will be allowed to degrade naturally to the standards specified in the ROD Amendment. However, stream sediments will continue to be monitored, and the areas of concern in the stream will be posted with cautionary signs. In addition, the discharge and surface water runoff from the Site will continue to be monitored to ensure protectiveness.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

7. The J.H. Baxter Superfund Site is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

8. Each Respondent is a "person" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

9. Respondents are "liable parties" as defined in section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and are subject to this Order under section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

10. The substances listed in Section II, Paragraph 2.D are found at the Site and are "hazardous substances" as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

11. The past disposal and subsequent migration of hazardous substances from the Site are a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

12. These hazardous substances have been released from the Site into soil, groundwater, sediment and surface water.

13. The potential for future migration of hazardous substances from the Site poses a threat of a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

14. The release and threat of release of one or more hazardous substances from the facility may present an imminent and substantial endangerment to the public health or welfare or the environment.

15. The contamination and endangerment at this Site constitute an indivisible injury. The actions required by this Order are necessary to protect the public health, welfare, and the environment.

IV. NOTICE TO THE STATE

16. On December 22, 1998, prior to issuing this Order, EPA notified the State of California, Department of Toxic Substances Control, that EPA would be issuing this Order.

V. ORDER

17. Based on the foregoing, Respondents are hereby ordered, jointly and severally, to comply with the following provisions, including but not limited to all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order. This Order overrides and supersedes the UAO issued by EPA on August 19, 1991, Docket No. 91-21.

VI. DEFINITIONS

18. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

b. "Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next working day.

c. "EPA" shall mean the United States Environmental Protection Agency.

d. "DTSC" shall mean the California Environmental Protection Agency, Department of Toxic Substances Control.

e. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.

f. "Operation and Maintenance" or "O&M" shall mean all activities required under the Operation and Maintenance Plan developed by Respondents pursuant to this Order and Section 4.4 of the Statement of Work, and approved by EPA.

g. "Owner Respondents" shall mean any Respondent that owns or controls property located within the Site.

h. "Paragraph" shall mean a portion of this Order identified by an arabic numeral.

i. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in the ROD as

amended by the ROD Amendment, and Statement of Work, that the Remedial Action and Work required by this Order must attain and maintain (including, without limitation, the requirements and specifications identified in Sections 8 through 10 and in Tables 4-1, 4-2, 8-2, 8-3, 8-4, 8-11, and 8-12 of the ROD Amendment)and Section 4 of the Statement of Work.

j. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Site dated September 25, 1990. The "ROD Amendment" shall mean Amendment #1 to the Record of Decision dated March 27, 1988 and all attachments thereto.

k. "Remedial Action" or "RA" shall mean those activities, except for Operation and Maintenance, to be undertaken by Respondents to implement the final plans and specifications submitted by Respondents pursuant to the Remedial Action Work Plans approved by EPA, including any additional activities required under Sections X, XI, XII, XIII, and XIV of this Order.

l. "Remedial Design" or "RD" shall mean those activities to be undertaken by Respondents to develop the final plans and specifications for the Remedial Action.

m. "Respondents" shall mean J.H. Baxter and Company, International Paper, Inc., Roseburg Forest Products Co. and Beazer East, Inc.

n. "Response Costs" shall mean all costs, including direct costs, indirect costs, and accrued interest incurred by the United States to perform or support response actions at the Site. Response costs include but are not limited to the costs of overseeing the Work, such as the costs of reviewing or developing

plans, reports and other items pursuant to this Order and costs associated with verifying the Work.

o. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the Remedial Design, Remedial Action, and Operation and Maintenance at the Site, as set forth in Attachment 3 to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order.

p. "Section" shall mean a portion of this Order identified by a roman numeral and includes one or more paragraphs.

q. "Site" shall mean the J.H. Baxter Superfund Site, located in Weed, California, which includes approximately 33 acres owned by J.H. Baxter and Company ("Baxter"),portions of property owned by Roseburg Forest Products Company ("Roseburg")and all areas, including soil, sediment, groundwater and surface water, where hazardous substances from these properties have come to be located. (See map in Attachment 4)

r. "State" shall mean the State of California.

s. "United States" shall mean the United States of America.

t. "Work" shall mean all activities Respondents are required to perform under this Order, including Remedial Design, Remedial Action, Operation and Maintenance, and any activities required to be undertaken pursuant to Sections VII through XXIV, and XXVII of this Order.

VII. NOTICE OF INTENT TO COMPLY

19. Respondent shall provide, not later than five (5) days after the effective date of this Order, written notice to EPA's Remedial Project Manager ("RPM") stating whether they will comply with the terms of this Order. If Respondents do not unequivocally commit to perform the RD and RA as provided by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondents' assertions.

VIII. PARTIES BOUND

20. This Order shall apply to and be binding upon each Respondent identified in paragraph 3, their directors, officers, employees, agents, successors, and assigns. Respondents are jointly and severally responsible for carrying out all activities required by this Order. No change in the ownership, corporate status, or other control of any Respondents shall alter any of the Respondents' responsibilities under this Order.

21. Respondents shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondents' assets, property rights, or stock are transferred to the prospective owner or successor. Respondents shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work under this Order, within

five (5) days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing any Respondents with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondents within the meaning of section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that their contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

IX. WORK TO BE PERFORMED

22. Respondents shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondents shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

23. All aspects of the Work to be performed by Respondents pursuant to this Order shall be under the direction and supervision of a qualified project manager the selection of which shall be subject to approval by EPA. Within five (5) days after the effective date of this Order, Respondents shall notify EPA in writing of the name and qualifications of the project manager, including primary support entities and staff, proposed to be used

in carrying out Work under this Order. If at any time Respondents proposes to use a different project manager, Respondents shall notify EPA and shall obtain approval from EPA before the new project manager performs any Work under this Order.

24. EPA will review Respondents' selection of a project manager according to the terms of this paragraph and Section XIV of this Order. If EPA disapproves of the selection of the project manager, Respondents shall submit to EPA within 30 days after receipt of EPA's disapproval of the project manager previously selected, a list of project managers, including primary support entities and staff, that would be acceptable to Respondents. EPA will thereafter provide written notice to Respondents of the names of the project managers that are acceptable to EPA. Respondents may then select any approved project manager from that list and shall notify EPA of the name of the project manager selected within twenty-one (21) days of EPA's designation of approved project managers.

A. Remedial Design

25. The Respondents have submitted and EPA has approved the following Remedial Design deliverables: 100% Remedial Design Report Ground Water/Slurry Wall Remediation System, 100% Remedial Design Proposed Bioventing System Area B Soils and the Design for the Stormwater Pond. Respondents have submitted the following Design Reports to EPA for review and approval: Remedial Design Report for Surface Soils and Ditch Sediments, Sitewide Quality Assurance Project Plan and Draft Operations and Maintenance Plan Ground Water/ Slurry Wall Remediation System. Within 30 days of the effective date of this Order, Respondents shall submit to EPA for approval all remaining Remedial Design Reports. The Remedial Design Reports shall include a step-by-step plan for completing the remedial design for the remedy described in the ROD and for attaining and maintaining all requirements, including Performance Standards, identified in the ROD. The Remedial Design Reports must describe in detail the tasks and deliverables that Respondents will complete during the remedial design phase, and a schedule for completing the tasks and deliverables. The Design Reports shall include, at a minimum, the following: (1) final plans and specifications; (2) an Operation and Maintenance Plan; (3) the Construction Quality Assurance Plan (CQAP); (4) the Field Sampling Plan (directed at measuring progress towards meeting performance standards); and (5) a Contingency Plan. The CQAP shall describe the approach to quality assurance during construction activities at the Site and shall specify a quality assurance official (QA Official), independent of the construction contractor, to conduct a quality assurance program during the construction phase of the project.

26. Respondents have submitted a 90% Health and Safety Plan for

Soil and Ground Water Remediation to EPA for review and approval. Within thirty (30) days after receipt of EPA's comments, Respondents shall incorporate EPA's comments and submit the Final Health and Safety Plan to EPA. The Site Health and Safety Plan shall conform to the applicable Occupational Safety and Health Administration and EPA requirements, including but not limited to 54 Fed. Reg. 9294.

27. The Remedial Design Reports shall be consistent with, and shall provide for implementing the Statement of Work, and shall comport with EPA's "Superfund Remedial Design and Remedial Action Guidance, OSWER Directive 9355.0-4A". Upon approval by EPA, the Remedial Design Reports are incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order.

28. Upon approval of the Remedial Design Reports by EPA, Respondents shall implement the Remedial Design Reports according to the schedule in the approved Remedial Design Reports. Any violation of the approved Remedial Design Reports shall be a violation of this Order. Unless otherwise directed by EPA, Respondents shall not perform Work covered by a Remedial Design Report at the Site prior to EPA's written approval of the Remedial Design Report.

B. Remedial Action

29. Respondents have submitted the following Remedial Action Work Plans for EPA's review and approval: Remedial Action Work Plan Ground Water/Slurry Wall Remediation System; Remedial Action Work Plan Surface Soils and Ditch Sediments; Postclosure Operations and Maintenance Plan Surface Soils, Area B and Ditch Sediments; Monitoring Confirmation Sampling Plan, Surface Soils, Area B and Ditch Sediments; Monitoring Confirmation Sampling Plan for Surface Soils, Area B and Ditch Sediments. Respondent(s) shall submit the Final Remedial Action Work Plans to EPA according to the schedule set forth in Section 5 of the Statement of Work. The RA Work Plans shall be developed in accordance with the ROD as amended by the ROD Amendment, and the attached Statement of Work, and shall be consistent with the Final Design Reports as approved by EPA. The Remedial Action Work Plans shall include methodologies, plans and schedules for completion of at least the following: (1) selection of the remedial action contractor; (2) implementation of the CQAP; (3) development and submission of the ground water monitoring plan; (4) identification of and satisfactory compliance with applicable permitting requirements; (5) implementation of the Operation and Maintenance Plan; (6) implementation of the Contingency Plan; and (7) development and submission of the Performance Standards assessment plan. The Remedial Action Work Plans shall also include a schedule for implementing all remedial action tasks identified in the Statement of Work and shall identify the initial formulation of

Respondent's Remedial Action Project Team (including the Supervising Contractor). Respondent(s) shall also submit to EPA for review, not later than 30 days after EPA approves all deliverables required as part of the Final Design, a Health and Safety Plan for field activities required by the Remedial Action Work Plans. The Health and Safety Plan for field activities shall conform to applicable Occupational Safety and Health Administration and EPA requirements, including but not limited to the regulations at 54 Fed. Reg. 9294.

30. Upon approval by EPA, the Remedial Action Work Plans are incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order.

31. Upon approval of the Remedial Action Work Plans by EPA, Respondents shall implement the Remedial Action Work Plans according to the schedules in the Remedial Action Work Plans. Unless otherwise directed by EPA, Respondents shall not commence remedial action at the Site prior to approval of the Remedial Action Work Plan.

32. If Respondents seeks to retain a construction contractor to assist in the performance of the Remedial Action, then Respondents shall submit a copy of the contractor solicitation documents to EPA not later than five (5) days after publishing the solicitation documents.

33. Within 10 days of the effective date of this Order, Respondents shall notify EPA in writing of the name, title, and qualifications of any construction contractor proposed to be used in carrying out work under this Order. EPA shall thereafter provide written notice of the names of the contractors it approves, if any. Respondents may select any approved contractor from that list and shall notify EPA of the name of the contractor selected within twenty one (21) days of EPA's designation of approved contractors. If at any time Respondents propose to change the construction contractor, Respondents shall notify EPA and shall obtain approval from EPA as provided in this paragraph, before the new construction contractor performs any work under this Order. If EPA disapproves of the selection of any contractor as the construction contractor, Respondents shall submit a list of contractors that would be acceptable to them to EPA within thirty (30) days after receipt of EPA's disapproval of the contractor previously selected.

34. The Work performed by Respondents pursuant to this Order shall, at a minimum, achieve the Performance Standards specified in the Record of Decision and in Section 4 of the Statement of Work.

35. Notwithstanding any action by EPA, Respondents remain fully responsible for achievement of the Performance Standards in the Record of Decision and Statement of Work. Nothing in this Order,

or in EPA's approval of the Statement of Work, or in the Remedial Design or Remedial Action Work Plans, or approval of any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the Remedial Design or Remedial Action will achieve the Performance Standards set forth in the ROD and in Section 4 of the Statement of Work. Respondent's compliance with such approved documents does not foreclose EPA from seeking additional work to achieve the applicable performance standards.

36. Respondents shall, prior to any off-site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving state and to EPA's RPM of such shipment of hazardous substances. However, the notification of shipments shall not apply to any off-Site shipments when the total volume of all shipments from the Site to the State will not exceed ten (10) cubic yards.

i) The notification shall be in writing, and shall include the following information, where available: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous

substances; and (4) the method of transportation. Respondents shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

ii) The identity of the receiving facility and state will be determined by Respondents following the award of the contract for Remedial Action construction. Respondents shall provide all relevant information, including information under the categories noted in paragraph i above, on the off-Site shipments as soon as practicable after the award of the contract and before the hazardous substances are actually shipped.

37. Within thirty (30) days after Respondents conclude that the Remedial Action has been fully performed, Respondents shall so notify EPA and shall schedule and conduct a pre-certification inspection to be attended by Respondents and EPA. The pre-certification inspection shall be followed by a written report submitted within thirty (30) days of the inspection by a registered professional engineer and Respondents's Project Coordinator certifying that the Remedial Action has been completed in full satisfaction of the requirements of this Order. If, after

completion of the pre-certification inspection and receipt and review of the written report, EPA determines that the Remedial Action or any portion thereof has not been completed in accordance with this Order, EPA shall notify Respondents in writing of the activities that must be undertaken to complete the Remedial Action and shall set forth in the notice a schedule for performance of such activities. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established therein. If EPA concludes, following the initial or any subsequent certification of completion by Respondents that the Remedial Action has been fully performed in accordance with this Order, EPA may notify Respondents that the Remedial Action has been fully performed. EPA's notification shall be based on present knowledge and Respondents' certification to EPA, and shall not limit EPA's right to perform periodic reviews pursuant to section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

38. Within thirty (30) days after Respondents conclude that all phases of the Work have been fully performed, that the Performance Standards have been attained, and that all Operation and Maintenance activities have been completed, Respondents shall

submit to EPA a written report by a registered professional engineer certifying that the Work has been completed in full satisfaction of the requirements of this Order. EPA shall require such additional activities as may be necessary to complete the Work or EPA may, based upon present knowledge and Respondents' certification to EPA, issue written notification to Respondents that the Work has been completed, as appropriate, in accordance with the procedures set forth in Paragraph 37 for Respondent's certification of completion of the Remedial Action. EPA's notification shall not limit EPA's right to perform periodic reviews pursuant to section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

X. FAILURE TO ATTAIN PERFORMANCE STANDARDS

39. In the event that EPA determines that additional response activities are necessary to meet applicable Performance Standards, EPA may notify Respondents that additional response actions are necessary.

40. Unless otherwise stated by EPA, within thirty (30) days of receipt of notice from EPA that additional response activities are

necessary to meet any applicable Performance Standards, Respondents shall submit for approval by EPA a work plan for the additional response activities. The plan shall conform to the applicable requirements of sections IX, XVI, and XVII of this Order. Upon EPA's approval of the plan pursuant to Section XIV, Respondents shall implement the plan for additional response activities in accordance with the provisions and schedule contained therein.

XI. EPA PERIODIC REVIEW

41. Under section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any applicable regulations, EPA may review the Site to assure that the Work performed pursuant to this Order adequately protects human health and the environment. Until such time as EPA certifies completion of the Work, Respondents shall conduct the requisite studies, investigations, or other response actions as determined necessary by EPA in order to permit EPA to conduct the review under section 121(c) of CERCLA. As a result of any review performed under this paragraph, Respondents may be required to perform additional Work or to modify Work previously performed.

XII. ADDITIONAL RESPONSE ACTIONS

42. EPA may determine that in addition to the Work identified in

this Order and attachments to this Order, additional response activities may be necessary to protect human health and the environment. If EPA determines that additional response activities are necessary, EPA may require Respondents to submit a work plan for additional response activities. EPA may also require Respondents to modify any plan, design, or other deliverable required by this Order, including any approved modifications.

43. Not later than thirty (30) days after receiving EPA's notice that additional response activities are required pursuant to this Section, Respondents shall submit a work plan for the response activities to EPA for review and approval. Upon approval by EPA, the work plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon approval of the work plan by EPA, Respondents shall implement the work plan according to the standards, specifications, and schedule in the approved work plan. Respondents shall notify EPA of their intent to perform such additional response activities within seven (7) days after receipt of EPA's request for additional response activities.

XIII. ENDANGERMENT AND EMERGENCY RESPONSE

44. In the event of any action or occurrence during the performance of the Work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately notify EPA's Remedial Project Manager (RPM) or, if the RPM is unavailable, EPA's Alternate RPM. If neither of these persons is available Respondents shall notify the EPA Emergency Response Section, Region IX. Respondents shall take such action in consultation with EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the Health and Safety Plan and the Contingency Plan. In the event that Respondents fail to take appropriate response action as required by this Section, and EPA takes that action instead, Respondents shall reimburse EPA for all costs of the response action not inconsistent with the NCP. Respondents shall pay the response costs in the manner described in Section XXIV of this Order, within thirty (30) days of Respondent's receipt of demand for payment and an itemized cost summary report.

45. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all

appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XIV. EPA REVIEW OF SUBMISSIONS

46. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondents to re-submit the document after incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in paragraphs (a) or (b) of this paragraph.

47. In the event of approval or approval with modifications by EPA, Respondents shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA.

48. Upon receipt of a notice of disapproval and a request for a modification, Respondents shall, within twenty-one (21) days or such longer time as specified by EPA in its notice of disapproval

and request for modification, correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

49. If any submission is not approved by EPA, Respondents shall be deemed to be in violation of this Order.

XV. PROGRESS REPORTS

50. In addition to the other deliverables set forth in this Order, Respondents shall provide monthly progress reports to EPA with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the tenth day of each month following the effective date of this Order. Respondents' obligation to submit progress reports continues until EPA gives Respondents written notice under paragraph 38 that the Work has been completed. At a minimum these progress reports shall: (1) describe the actions which have been taken to comply with this Order during the prior month; (2) include all results of sampling and tests and all other data received by Respondents and not previously submitted to EPA; (3) describe all work planned for the next month with schedules relating such work to the overall

project schedule for RD/RA completion; and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

XVI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

51. Respondents shall use the quality assurance, quality control, and chain of custody procedures described in the "EPA NEIC Policies and Procedures Manual," May 1978, revised May 1986, EPA-330/9-78-001-R, EPA's "Guidelines and Specifications for Preparing Quality Assurance Program Documentation," June 1, 1987, EPA's "Data Quality Objective Guidance," (EPA/540/G87/003 and 004); EPA's "Guidance for Data Quality Objectives (DQO) Process," September 1994 (EPA QA/G-4); "Preparation of a U.S. EPA Region 9 Field Sampling Plan for Private and State-Lead Superfund Project," August 1993 (EPA QAMS DCN 9QA-06-93); "USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review," February 1994 (EPA 540/R-94/013): "USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review," February 1994 (EPA 540/R-94/012); and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondents shall:

a. Use only laboratories which have a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.

b. Ensure that the laboratory used by the Respondents for analyses, performs according to a method or methods deemed satisfactory to EPA and submits all protocols to be used for analyses to EPA at least fifteen (15) days before beginning analysis.

c. Ensure that EPA personnel and EPA's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondents for analyses.

52. Respondents shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. At the request of EPA, Respondents shall allow split or duplicate samples to be taken by EPA or its authorized representatives, of any samples collected by Respondents with regard to the Site or pursuant to the implementation of this Order. In addition, EPA shall have the right to take any additional samples that EPA deems necessary.

XVII. COMPLIANCE WITH APPLICABLE LAWS

53. All activities by Respondents pursuant to this Order shall be performed in accordance with the requirements of all Federal and state laws and regulations. EPA has determined that the activities contemplated by this Order will be consistent with the National Contingency Plan (NCP).

54. Except as provided in section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a Federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

55. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or state statute or regulation.

56. All materials removed from the Site shall be disposed of or treated at a facility approved by EPA's RPM and in accordance with section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); with the requirements for off-site management of hazardous substances set forth in 40 CFR 300.440; and with all other applicable Federal, state, and local requirements.

XVIII. REMEDIAL PROJECT MANAGER

57. All communications, whether written or oral, from Respondents to EPA shall be directed to EPA's Remedial Project Manager or Alternate Remedial Project Manager. Respondents shall submit to EPA three copies of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Order, and shall send these documents by overnight mail, unless otherwise specified by EPA's RPM.

EPA's Remedial Project Manager is:

Beatriz Bofill
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street (SFD 7-2)
San Francisco, CA 94105
(415) 744-2235

EPA's Alternate Remedial Project Manager is:

Kathi Moore
Section Chief
U.S. Environmental Protection Agency
75 Hawthorne Street (SFD 7-2)
San Francisco, CA 94105
(415) 744-2221

58. EPA has the unreviewable right to change its Remedial Project Manager or Alternate Remedial Project Manager. If EPA changes its Remedial Project Manager or Alternate Remedial Project Manager, EPA will inform Respondents in writing of the name, address, and telephone number of the new Remedial Project Manager or Alternate Remedial Project Manager.

59. EPA's RPM and Alternate RPM shall have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. EPA's RPM or Alternate RPM shall have authority, consistent with the National Contingency Plan, to halt any work required by this Order, and to take any necessary response action.

60. Within ten (10) days after the effective date of this Order, Respondents shall designate a Project Coordinator and shall submit the name, address, and telephone number of the Project Coordinator to EPA for review and approval. Respondents' Project Coordinator shall be responsible for overseeing Respondents's implementation of this Order. If Respondents wish to change their Project Coordinator, Respondents shall provide written notice to EPA, five (5) days prior to changing the Project Coordinator, of the name and qualifications of the new Project Coordinator. Respondents' selection of a Project Coordinator shall be subject to EPA approval.

XIX. SITE ACCESS, DATA/DOCUMENT AVAILABILITY, USE RESTRICTIONS

61. Respondents shall allow EPA and its authorized representatives and contractors to enter and freely move about all property at the Site and off-Site areas subject to or affected by the work under this Order or where documents required to be prepared or maintained by this Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondents and their representatives or contractors pursuant to this Order; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting tests as EPA or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to EPA by Respondents. Respondents shall allow EPA and its authorized representatives to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Order. Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under Federal law.

62. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim

accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the state without further notice to the Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

63. Respondents shall maintain for the period during which this Order is in effect, an index of documents that Respondents claim contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondents shall submit a copy of the index to EPA.

64. With respect to any property owned or controlled by Respondents that is located within the Site, within 15 days after the effective date of the Order, the Owner Respondents shall submit to EPA for review and approval a notice to be filed with the Recorder's Office, Siskiyou County, State of California, which shall provide notice to, including but not limited to, all successors-in-title that the property is part of the Site, that EPA selected a remedy for the Site on September 27, 1990, and amended this remedy on March 27, 1998, and that EPA issued an Order requiring implementation of the remedy. Such notice shall identify this Order number and the date that the Order was issued by EPA and the land use restrictions set forth in paragraph 67. The Owner Respondents shall record the notice within 10 days of EPA's approval of the notice. The Owner Respondents shall provide EPA with a certified copy of the recorded notice within 10 days of recording such notice.

65. At least 60 days prior to the conveyance of any interest in property located within the Site including, but not limited to, fee

interests, leasehold interests, and mortgage interests, the Owner Respondents conveying the interest shall give the grantee, lessee and/or mortgage interest holder written notice of this Order. At least 60 days prior to such conveyance, the Owner Respondents conveying the interest shall also give written notice to EPA and the State of the proposed conveyance, including the name and address of the grantee, lessee, and or mortgage interest holder and the date on which notice of the Order was given to the grantee. At least 60 days prior to such conveyance, the Owner Respondents shall offer the State a negative easement or restrictive covenant with the land use restrictions set forth in paragraph 67 in a form approved by EPA. The State may accept or deny such a negative easement or restrictive covenant.

66. In the event of any such conveyance, the Owner Respondents' obligations under this Order, including, but not limited to, its obligation to provide or secure access and institutional controls, as well as to abide by such institutional controls pursuant to this Order, shall continue to be met by the Owner Respondents. In no event shall the conveyance release or otherwise affect the liability of the Owner Respondent to comply with all provisions of this Order.

67. Respondents shall refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial measures to be implemented pursuant to this Order. Owner Respondents shall:

i. Prohibit residential uses, including mobile home, single/multi family home, factory built housing, hospitals, public or private schools, day care centers

and similar uses;

ii. Prevent access to and use of groundwater in the DNAPL Zone and other areas with concentrations of contaminants that exceed the groundwater cleanup standards set forth in Table 4-2 of the ROD Amendment at the Site (with the exception of the remediation of groundwater);

iii. Prevent exposure to waste left in the DNAPL zone; and

iv. Prohibit activities that would disturb the integrity of the remedy, including appropriate prohibitions on activities that would disturb the soil and/or any cap placed upon such soil, seeps, slurry wall and RCRA equivalent disposal cell, unless approved in writing and in advance by EPA.

XXI. RECORD PRESERVATION

68. Respondents shall provide to EPA upon request, copies of all documents and information within their possession and/or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA for purposes of investigation, information gathering, or testimony, their

employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

69. Until ten (10) years after EPA provides notice pursuant to paragraph 38 of this Order that the Work has been completed, each Respondent shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of their contractors and agents on and after the effective date of this Order that relate in any manner to the Site. At the conclusion of this document retention period, Respondents shall notify the United States at least ninety (90) calendar days prior to the destruction of any such records or documents, and upon request by the United States, Respondents shall deliver any such records or documents to EPA.

70. Until ten (10) years after EPA provides notice pursuant to paragraph 38 of this Order that the Work has been completed, Respondents shall preserve, and shall instruct their contractors and agents to preserve, all documents, records, and information of whatever kind, nature or description relating to the performance of the Work. Upon the conclusion of this document retention period, Respondents shall notify the United States at least ninety (90) days prior to the destruction of any such records, documents or information, and, upon request of the United States, Respondents shall deliver all such documents, records and information to EPA.

71. Within ten (10) days after the effective date of this Order, Respondents shall submit a written certification to EPA's RPM that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to their potential liability with regard to the Site since notification of potential liability by the United States or the

State or the filing of suit against it regarding the Site. Respondents shall not dispose of any such documents without prior approval by EPA. Respondents shall, upon EPA's request and at no cost to EPA, deliver the documents or copies of the documents to EPA.

XXI. DELAY IN PERFORMANCE

72. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this paragraph shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

73. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM or Alternate RPM within forty eight (48) hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

XXII. ASSURANCE OF ABILITY TO COMPLETE WORK

74. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within thirty (30) days after approval of the RD Work Plan, one of the following: (1) a performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) internal financial information to allow EPA to determine that Respondents have sufficient assets available to perform the Work. Respondents shall demonstrate financial assurance in an amount no less than the estimate of cost for the remedial design and remedial action contained in the Record of Decision as amended by the ROD Amendment for the Site. If Respondents seeks to demonstrate ability to complete the remedial action by means of internal financial information, or by guarantee of a third party, they shall re-submit such information annually, on the anniversary of the effective date of this Order. If EPA determines that such financial information is inadequate, Respondents shall, within thirty (30) days after receipt of EPA's notice of determination, obtain and present to EPA for approval one of the other three forms of financial assurance listed above.

75. Within ten (10) days of the effective date of this Order, Respondents shall submit to EPA a certification that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondents pursuant to this Order. Respondents shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

XXIII. REIMBURSEMENT OF RESPONSE COSTS

76. Respondents shall reimburse EPA, upon written demand, for all response costs incurred by the United States in overseeing Respondents' implementation of the requirements of this Order or in performing any response action which Respondents fails to perform in compliance with this Order. EPA may submit to Respondents on a periodic basis an accounting of all response costs incurred by the United States with respect to this Order. EPA's certified Agency Financial Management System summary data (SPUR Reports), or such other summary as certified by EPA, shall serve as basis for payment demands.

77. Respondents shall, within thirty (30) days of receipt of each EPA accounting, remit a certified or cashier's check for the amount of those costs. Interest shall accrue from the later of the date that payment of a specified amount is demanded in writing or the date of the expenditure. The interest rate is the rate established by the Department of the Treasury pursuant to 31 U.S.C. § 3717 and 4 C.F.R. § 102.13.

78. Checks shall be made payable to the Hazardous Substances Superfund and shall include the name of the Site, the Site identification number, the account number and the title of this Order. Checks shall be forwarded to:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 360863M
Pittsburgh, PA 15251

79. Respondents shall send copies of each transmittal letter and check to the EPA's RPM.

XXIV. UNITED STATES NOT LIABLE

80. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXV. ENFORCEMENT AND RESERVATIONS

81. EPA reserves the right to bring an action against Respondents under section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order and not reimbursed by Respondents. This reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in section 107(a) of CERCLA.

82. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

83. Nothing in this Order shall preclude EPA from taking any

additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), et seq., or any other applicable law. Respondents shall be liable under CERCLA section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

84. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

85. Respondents shall be subject to civil penalties under section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than $27,500 for each day in which Respondents willfully violate, or fail or refuse to comply with this Order without sufficient cause. In addition, failure to properly provide response action under this Order, or any portion hereof, without sufficient cause, may result in liability under section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

86. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

87. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXVI. ADMINISTRATIVE RECORD

88. Upon request by EPA, Respondents must submit to EPA all documents related to the selection of the response action for possible inclusion in the administrative record file.

XXVII. EFFECTIVE DATE AND COMPUTATION OF TIME

89. This Order shall be effective thirty (30) days after the Order is signed by the Director, Superfund Division, U.S. EPA Region IX. All times for performance of ordered activities shall be calculated from this effective date.

XXIII. OPPORTUNITY TO CONFER

90. Respondents may, within fifteen (15) days after the date this Order is signed, request a conference to discuss this Order with EPA at its Region IX offices located at 75 Hawthorne Street in San Francisco, California. If requested, the conference shall occur at 75 Hawthorne Street, San Francisco, California unless otherwise agreed to by EPA. Only one conference will be held with Respondents with respect to this Order.

91. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions

required by this Order and the extent to which Respondents intends to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondents' request, Respondents may appear in person or by an attorney or other representative.

92. Requests for a conference must be by telephone followed by written confirmation mailed that day to Jan Carlson, Senior Counsel at (415) 744-1345, EPA Region IX, 75 Hawthorne Street, Mail Code ORC3, San Francisco, CA 94105.

So Ordered, this 23rd day of Dec, 1998.

BY: _____
for Keith Takata, Director
Superfund Division
U.S. Environmental Protection Agency

STATEMENT OF WORK FOR REMEDIAL ACTION

J.H. Baxter Superfund Site, Siskiyou County, California

Table of Contents

Attachment 3

1.0 Introduction

1.1 Purpose

The purpose of this Statement of Work (SOW) is to set forth the framework and requirements for implementing the Remedial Action (RA) at the J.H. Baxter Superfund Site, in accordance with the 1990 Record of Decision signed on September 27, 1990 (ROD) as amended by the ROD Amendment issued on March 27, 1998 (the ROD Amendment). In August 1991, EPA issued a Unilateral Administrative Order (UAO) to the Respondents to implement the ROD. This SOW supersedes the SOW which accompanied the 1991 UAO. The Respondents shall complete construction of the RA by the year 2000.

1.1.1 An overview of the basic elements of the Remedial Action include:

1.1.1.1 Soils
- In-situ biotreatment for organics, followed by excavation
- Excavation and fixation for inorganics
- Disposal
  - RCRA-equivalent disposal cell
  - Modified leachate test to verify compliance with treatment standard.
- Grading of Roseburg excavation
- Capping of soils contaminated with inorganics that exceed the Surface Soil Standards, but meet Subsurface soil Standards with a wearing surface

1.1.1.2 Groundwater
- Construction of a slurry wall
- Pumping and treatment of water outside the slurry wall
- Monitoring/extraction wells
- Modifications to water treatment plant to increase capacity

1.1.1.3 Surface water
- Stormwater ponds to collect surface water
- Site grading to facilitate collection of stormwater runoff

1.1.1.4 Sediments
- Natural Flushing

1.1.1.5 Beaughton Creek
- Continued Monitoring

1.1.1.6 Dust Control
- Air monitoring

1.1.1.7 Area B
- Bioventing
- Development of models to assess impact to groundwater
- Excavation and disposal if bioventing is not successful

1.1.1.8 Operation & Maintenance

1.1.1.9 Land Use Restrictions

1.1.2 Respondents shall implement all activities related to Design, Construction, Compliance Testing, and Operation & Maintenance of the above mentioned elements as part of the Work to be performed. The Work also includes the development and implementation of management plans as well as communication, integration and coordination procedures.

1.2 General Requirements

1.2.1 The Respondents shall design, construct, operate and maintain the RA to meet the Performance Standards and other provisions and requirements set forth in this SOW, the

approved final plans and specifications developed during the RD, and the 1990 ROD as amended by the ROD Amendment issued on March 27, 1998. Respondents shall follow the *Remedial Design/Remedial Action (RD/RA) Handbook* (U.S. EPA Office of Solid Waste and Emergency Response (OSWER) 9355.0-04B, EPA 540/R-95/059, June 1995), and all other guidance provided by EPA in conducting the RA. The primary contact for this work assignment is Beatriz Bofill, tel. (415)744-2235; the secondary contact is Kathi Moore, tel. (415)744-2221.

1.2.2 The Respondents shall comply with the schedule set forth in Section 5 in submitting deliverables and implementing the Work at the Site.

1.2.3 The Respondents shall summarize meetings and conversations with EPA within two working days of the meeting or conversation, however modifications to the work may only be made in writing by EPA.

2.0 Project Planning and Support

The purpose of this task is to set forth the plans for the execution and overall management of the Work. Respondents shall perform the following activities as part of the project planning and support task:

2.1 Project Management

2.1.1. The Respondents shall conduct site visits with the EPA RPM prior to RA construction to assist in developing an understanding of the site and any construction logistics pursuant to the schedule set forth in Section 5.0 of this SOW. Respondents shall follow the EPA approved Health and Safety Plan (HASP) for the site visit. The Respondents shall prepare a report that documents the site visit and any required action items or decisions. This report shall be submitted to the EPA RPM within 10 calendar days of the site visit.

2.1.2 The Respondents shall provide EPA with signed monthly progress reports during the design and construction phases and monthly progress reports for operation and maintenance as appropriate for the various components of the Remedial Action. The monthly reports shall address each Component of the Remedial Action and shall contain the following items. A copy of these monthly reports are to be sent to the Superfund Repositories in Weed.

(1) A description and estimate of the percentage completed of the Remedial Design or Construction for each component.
(2) Summaries of all findings.
(3) Summaries of all changes made in the RD/RA during the reporting period.
(4) Summaries of all contacts with representatives of the local community, public interest groups, or State and local government during the reporting period.
(5) Summaries of all problems or potential problems related to each component encountered during the reporting period and actions being taken to rectify problems.
(6) Changes in personnel during the reporting period.
(7) Projected work for each component for the next reporting period.

2.1.3 The Respondents shall submit to EPA within 30 days of the start of each calendar year an Annual Report. The Annual Report shall present summaries and highlights of work accomplished the previous year, including all milestones met. The Annual Report shall also contain copies of all data collected and produced during the previous year. A copy of this report will also be sent to the Superfund Repositories in Weed.

2.1.4 Remedial Action Report of Completion of Construction. The Respondents shall at the "completion" of construction of each component of the Remedial Action (that is , at the point at which each component has been operating according to specifications), submit a Remedial Action Report of Completion of Construction to EPA.

2.1.5 The Respondents shall attend project meetings, provide documentation of meeting results, and shall contact the RPM by e-mail or phone on a weekly basis (every Friday by close of business) to report project status during periods of construction related to the remedial action. At this time Respondents shall also inform the RPM of activities conducted on the Site that week, and what is expected to take place for the following week.

2.1.6 Coordinate with Local Emergency Response Teams. The Respondents shall coordinate with local emergency responders to ensure the proper implementation of the HASP and specifically the Emergency Response Plan. The Respondents shall review and complete the emergency responder agreement, if necessary, conduct a kickoff meeting at the site with all local emergency responders, and notify the responders of any changes to the Emergency Response Plan throughout the RA.

2.2 Evaluate Existing Information

The Respondents shall obtain and evaluate existing data and documents pertinent to the implementation of the ROD, as modified by the ROD Amendment. This information shall be used to determine whether any additional data are needed for RD implementation. A report reviewing outstanding issues will be submitted to EPA within 15 days of the effective date of this order.

2.3 Site Specific Plans

The purpose of this subtask is to review the existing site-specific plans that were prepared during RD and earlier phases, and to update them, as necessary, to implement the RA. The site-specific plans include a health and safety plan, sampling and analysis plan, and construction quality assurance plan. The Respondents have the overall responsibility to prepare, update, and/or maintain the necessary site-specific plans for implementation of the RA. Since the construction contractor and any subcontractors will prepare their own RA plans, the Respondents will incorporate the plans and procedures received from any subcontractors into the overall site plans. Construction plans and procedures are living documents and the Respondents shall update the appropriate plans, as necessary, throughout the RA. The Respondents shall submit the updated plan to EPA for review and approval.

2.3.1 Update Health and Safety Plan (HASP). Respondents shall submit a site-specific HASP that addresses overall health and safety considerations for all personnel onsite. The Respondent shall incorporate the construction contractor's and any subcontractors' HASPs into the overall site plan. The Respondents shall provide the overall framework for site safety and ensure that adequate warning systems and notifications are understood by all parties. The HASP shall specify employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 40 CFR 300.150 of the NCP and 29 CFR 1910.120 1(1) and (1)(2). The Respondents shall incorporate elements of the HASP developed for the RI/FS or RD when preparing the HASP for the RA.

2.3.2 Update Sampling and Analysis Plan (SAP). Respondents shall submit a sampling and analysis plan to reflect the specific objectives of any data acquisition conducted during the RA construction and the operation of the performance monitoring system. The SAP will outline the data collection and quality assurance requirements of any sampling and analysis conducted by the contractor.

(1) Quality Assurance Project Plan. The Respondents shall submit a Quality Assurance Project

Plan (QAPP) in accordance with EPA QA/R-5 (latest draft or revision). The QAPP shall describe the project objectives and organization, functional activities, and quality assurance/quality control (QA/QC) protocols that shall be used to achieve the desired data quality objectives (DQOs). The DQOs shall, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan.

(2) Field Sampling Plan. The Respondents shall submit a Field Sampling Plan (FSP) that defines the sampling and data collection methods that shall be used for the project. The FSP shall include sampling objectives; sample locations and frequency; sampling equipment and procedures; sample handling and analysis; and a breakdown of samples to be analyzed through the Contract Lab Program (CLP) and through other sources, as well as the justification for those decisions. The FSP shall consider the use of all existing data and shall justify the need for additional data whenever existing data will meet the same objective. The FSP shall be written so that a field sampling team unfamiliar with the site would be able to gather the samples and field information required. The Respondents shall submit any required changes to the FSP in a memorandum to the RPM for review and approval. The FSP shall outline the procedures for storing, handling, accessing, and securing data collected during the RA consistent with the existing Data Management system for the Site.

2.3.3 Update Construction Quality Assurance (CQA) Plan. The Respondents shall update the final Construction Quality Assurance (CQA) Plan as submitted as part of the final design documents. The CQA Plan shall outline the necessary steps to inspect and sample construction materials (i.e., membranes, concrete) and to ensure the overall quality of the constructed project. The CQA Plan shall be in accordance with "Construction Quality Assurance for Hazardous Waste Land Disposal Facilities" (EPA, October, 1986) and will include the following elements:

- Responsibility and authority of all organization and key personnel involved in the remediation action construction.
- CQA Personnel Qualifications. The Respondents shall establish the minimum qualifications of the CQA Officer and supporting inspection personnel.
- Inspection Activities. The Respondents shall establish the observations and tests that will be required to monitor the construction and/or installation of the components of the RA(s). The plan shall include the scope and frequency of each type of inspection to be conducted. Inspections shall be required to verify compliance with environmental requirements and include, but not be limited to, air quality and emissions monitoring records, waste disposal records (e.g., RCRA transportation manifests), etc. Inspections shall also ensure compliance with all health and safety procedures.
- Sampling requirements. The Respondents shall establish the requirements for sampling activities, sample size, sample locations, frequency of testing, criteria for acceptance and rejection, and plans for correcting problems as addressed in the project specifications.
- Documentation. The Respondents shall describe the reporting requirements for CQA activities. This shall include such items as daily summary reports and inspection data sheets.

3.0 Community Relations

3.1 Community Relations Support

The Respondents shall provide community relations support to EPA throughout the RA. The Respondents shall provide community relations support in accordance with *Community Relations in Superfund: A Handbook*, June 1988. Community relations support shall include the following subtasks:

3.1.1 Fact Sheet Preparation Assistance. The Respondents shall, at EPA's request, assist with the preparation of fact sheets that inform the public about activities related to the remedial design,

the schedule for RA, activities to be expected during construction, provisions for responding to emergency releases and spills, and any potential inconveniences such as excess traffic and noise that may affect the community during the RA.

3.1.2 Technical Support. The Respondents shall, at EPA's request, provide technical support for community relations, which may include providing technical input to news releases, fact sheets, briefing materials, and other community relations vehicles.

3.1.3 Public Meeting Support. The Respondents shall, at EPA's request, prepare presentation materials and provide logistical support for public meetings and open houses.

3.1.4 Public Notice. The Respondents shall, at EPA's request or as otherwise needed, provide individual notice to residents in the vicinity of areas where work will be performed by the Respondents.

3.1.5 The Respondents shall, at the request of EPA or Community members provide verbal status reports concerning the work performed by the Respondents. This shall include but not be limited to a dedicated telephone to answering questions of concerned Community members.

3.1.6 Report Copies. The Respondents shall, at the request of EPA, provide extra copies for the public of final deliverables or other documents produced pursuant to this Order.

4.0 Activities

4.1 Remedy Description

The Remedy is divided into different components and subcomponents to simplify management.

For purposes of this section, the Standard Leachate test shall mean the test methods set forth in EPA's RCRA Standard Toxicity Characteristic Leaching Procedures (TCLP) and California's Title 22. The modified leachate test shall mean the test methods set forth in EPA's TCLP test and California Title 22, however, deionized water shall be substituted for the leaching solution in these procedures.

4.1.1 Component 1: Soils contaminated with inorganics

Component 1a. All soils outside the slurry wall that are contaminated with inorganics that exceed the ROD Amendment Subsurface Soil Excavation Standards (Table 4-2), using the standard leachate test. All soils above 2 feet inside the slurry wall that are contaminated with inorganics that exceed the ROD Amendment Subsurface Soil Excavation Standards (Table 4-2), using the standard leachate test.

Remedy: Respondents shall excavate and treat all soils identified in component 1a by means of fixation to the treatment standards set forth in the ROD Amendment (Table 4-2) using the modified leachate test, and dispose of the treated soil in the onsite RCRA-equivalent disposal cell (see below 4.1.4)

Component 1b. Soils outside the Slurry Wall (DNAPL zone) that are contaminated with inorganics that exceed the ROD Amendment Subsurface Soil Excavation Standards (Table 4-2) using the standard unmodified RCRA hazardous waste characteristic leachate test, but meet the Table 4-2 treatment standards using the modified leachate test. All soils above 2 feet inside the slurry wall that are contaminated with inorganics that exceed the ROD Amendment Subsurface Soil Excavation Standards (Table 4-2) using the standard unmodified RCRA hazardous waste characteristic leachate test, but meet the Table 4-2 treatment standards using

the modified leachate test.

Remedy: Respondents shall excavate all component 1b soils and dispose of them in an onsite RCRA-equivalent disposal cell (see 4.1.4 below).

Component 1c. Soils contaminated with inorganics that exceed the ROD Amendment Surface Soil Excavation Standards set forth in Table 4-2 but meet the ROD Amendment Subsurface Soil Excavation Standards set forth in Table 4-2 (using the standard leachate test).

Remedy: Respondents shall leave Component 1 c soils in place. Respondents shall regrade and cover Component 1c soils with an asphaltic concrete wearing surface.

4.1.2 Component 2: Soils contaminated with organics

Component 2a. Soils outside the Slurry Wall (DNAPL Zone) that are contaminated with organics that exceed the ROD Amendment (Table 4-2) Subsurface Soil Excavation Standards, ROD Amendment (Table 4-2) Surface Soil Excavation Standards or exceed the ROD Amendment Treatment Standards (Table 4-2). All soils above 2 feet inside the Slurry Wall that are contaminated with organics that exceed the ROD Amendment (Table 4-2) Subsurface Soil Excavation Standards, ROD Amendment (Table 4-2) Surface Soil Excavation Standards or exceed the ROD Amendment Treatment Standards (Table 4-2).

Remedy: Respondents shall biotreat Component 2a soils to the Treatment Standards set forth in Table 4-2 (modified leachate test). The Respondents shall excavate and dispose of the treated soils in the RCRA-Equivalent disposal cell.

Component 2b. Soils outside the Slurry Wall that are contaminated with organics that exceed the ROD Amendment Surface Soil Excavation Standards in Table 4-2 , but meet the ROD Amendment Treatment Standards in Table 4–2. Soils above 2 feet inside the Slurry Wall that are contaminated with organics that exceed the ROD Amendment Surface Soil Excavation Standards in Table 4-2 , but meet the ROD Amendment Treatment Standards in Table 4–2.

Remedy: Respondents shall excavate all Component 2b Soils and dispose of them in the RCRA-equivalent disposal cell.

4.1.3 Component 3: Soils contaminated with Inorganics and Organics

Components 3a-3d. Soils contaminated with both inorganic and organic contaminants. Figure 3-1 of the ROD amendment shows the approximate location of these soils.

Remedy: For Component 3 soils, Respondents shall first follow the same prescribed remedy as above, according to the contaminant type, location and level of contamination of the soil. For soils that exceed both the inorganic and organic excavation standards in Table 4-2 of the ROD Amendment, Respondents shall first biotreat and then treat by fixation to reduce the leachability of inorganic and residual organic contaminants to the treatment standards set forth in Table 4-2 of the ROD Amendment.

Subsurface Component 1, 2 & 3 Soils in Slurry Wall (DNAPL zone). No excavation or treatment of Soil below 2 feet is required within the Slurry Wall (DNAPL zone).

4.1.4 RCRA-Equivalent Disposal Cell and the Soils Staging and Fixation Area

RCRA-Equivalent Disposal Cell Respondents shall dispose of Component 1a,1b,2a,2b,3

Soils after treatment to the Treatment Standards set forth in Table 4-2 in a RCRA-equivalent disposal cell (RCRA cell) designed and constructed as follows.

The Respondents shall design and construct an on-site RCRA-equivalent disposal cell that meets the substantive requirements of RCRA subtitle C (40 CFR Part 264, Subpart N) listed in Table 8-11, and the requirements listed in Table 8-4 of the ROD Amendment, and all the specifications of the approved Final Design. All soils to be placed in the RCRA cell must be sampled and handled in compliance with RCRA before placement in the RCRA cell (see Components 1-3 above). All treated soils shall be tested for leachability in accordance with the modified leachate test prior to disposal in the RCRA-equivalent disposal cell. After placement of properly managed contaminated soils, the Respondents shall cover the landfill with a cover that meets or exceeds the substantive requirements of RCRA Subtitle C. Upon completion of the cover, the Respondents shall vegetate the landfill. Respondents shall conduct groundwater and leachate monitoring and routine maintenance of the cover and all other closure and post closure requirements as set forth in Table 8-11 and as set forth in the approved O&M Plan.

Soils Staging and Fixation Area

The Respondents shall design, construct, operate and maintain a soil staging and fixation area to facilitate the implementation of the remedy in two respects. First, this area shall be designed to serve as a temporary storage (one year) for a small volume of contaminated surface soils excavated to construct the Slurry Wall. Second it will serve as a temporary holding area for contaminated surface soils that will be excavated and placed in the RCRA-equivalent disposal cell. The soil staging and fixation area is not considered a separate component but an integral part of the Soils Components. The location of the soil staging and fixation area is shown in Figure 8-2 of the ROD Amendment.

The Respondents shall design, construct, operate and maintain an on-site soils staging and fixation area that meets the requirements listed in Table 8-12, and the requirements listed in Table 8-4 of the ROD Amendment, and all the specifications of the approved Final Design. The soil staging and fixation area shall comply with the Chapter 15 liner, interim cover, precipitation and drainage control, and other requirements specified in Table 8-12 of the ROD Amendment, and will be closed in accordance with the RCRA clean closure requirements set forth in 40 CFR 264.258, as implemented through 22 CCR 66264.258. After approximately 1 year of operation, the Respondents shall close the soil staging and fixation area in accordance with the RCRA clean closure requirements for waste piles set forth in Table 8-12 of the ROD Amendment. Respondents shall excavate and dispose of, or decontaminate all contaminated soils, structures and equipment of the soils staging and fixation area. Respondents shall cover the staging and fixation area with an asphalt cap.

4.1.5 Roseburg Excavation

Respondents shall cover and regrade the Roseburg excavation identified in Figure1-2 of the ROD Amendment with a minimum of 2 feet of clean fill. EPA approves the Respondents' request to use the demolished Power House as fill.

4.1.6 Area B soil

The Respondents shall construct, operate and maintain a bioventing system to remediate the Area B soil identified in Figure 8-1 of the ROD Amendment. Respondents shall treat the soil until it meets the Area B Treatment Standards in Table 4-2 of the ROD Amendment. Respondents shall cover the soil with two feet of clean soil to prevent surface exposure to

contaminants. If in situ bioventing of Area B soils cannot achieve the Treatment Standards in Table 4-2, Respondents shall excavate and biotreat the soils to the soil Treatment Standards, and dispose of them in the RCRA-equivalent cell.

The Respondents shall perform modeling studies to ensure that the Area B Treatment Standards are protective of groundwater. The Respondents shall submit the modeling studies and a report to EPA with its evaluation of whether Area B Treatment Standards are protective of groundwater and submit them to EPA. If EPA concludes that the Area B Treatment Standards are protective of groundwater, then Area B soils will remain in place after treatment has been completed. If EPA concludes that the Area B Treatment Standards will not be protective of groundwater, then EPA may notify the Respondents that further excavation, treatment and subsequent disposal in a RCRA-equivalent disposal cell is required. Upon such notification, the Respondents shall implement the EPA required excavation, treatment and disposal.

4.1.7 Evaluation of Excavation Standards and Threat of Groundwater contamination

The Respondents shall conduct studies, including groundwater modeling, to evaluate whether the Area B Treatment Standards and Subsurface Excavation Standards outside the slurry wall (DNAPL Zone) are protective of groundwater. Within 30 days of completion of the soils remedy, Respondents shall submit a workplan for implementation of these studies to EPA for approval. Within 5 years of the construction of the bioventing system, Respondents shall submit a report to EPA which evaluates whether the soil is a threat to groundwater. At a minimum, the groundwater report shall address the following: 1) estimate the future incremental increase in concentration of organics in groundwater from the contamination in soils by using modeling; 2) estimate the incremental cancer risk from both ingestion of organics in groundwater and inhalation of organics during other household uses of groundwater, such as showering, over a lifetime derived from the contamination in soils.

4.1.8 Component 4 Groundwater

Slurry Wall

The Respondents shall construct and maintain a slurry wall to prevent migration of contamination outside the DNAPL Zone outlined in figure 2.2 of the ROD Amendment. Respondents shall construct the slurry wall according to the requirements set forth in Table 8-4 of the ROD Amendment and the specifications of the approved Final Design.

Groundwater within the Slurry Wall Respondents shall extract groundwater within the slurry wall in sufficient quantities to maintain an inward gradient within the slurry wall . Respondents shall extract and treat any DNAPL accumulations collected in wells within the DNAPL Zone.

Groundwater outside the Slurry Wall Respondents shall construct, operate and maintain a groundwater extraction system to restore the groundwater to the Aquifer Cleanup standards specified in Table 4-2 of the ROD Amendment throughout the plume outside the slurry wall. Respondents shall install and operate an extraction system that includes a network of wells designed to capture and extract the contaminated plume down gradient of the slurry wall.

Treatment & Disposal Respondents shall treat all extracted groundwater to the treatment standards specified in the ROD Amendment (Table 4-2) before any discharge. Respondents may discharge the treated water using the following options: industrial processes (log deck sprinkler system), reinjection to groundwater, use for irrigation (wetlands), discharge to

percolation trenches, and disposal to evaporation percolation ponds. Respondents must meet the "Aquifer Cleanup and Groundwater Treatment Standards" set forth in Table 4-2 before discharge to one of these options.

The substantive portions of Cease and Desist Order (No. 93-87) and Waste Discharge Requirements (Order No. 93-88) allow discharges to Beaughton Creek on a temporary basis, provided that these discharges are eliminated over time as the cleanup progresses. Respondents must operate the water treatment system in a manner that minimizes discharges to Beaughton Creek by preliminarily considering use of the other disposal options allowed by the ROD, leaving Beaughton Creek as a last and least favored option. Respondents shall meet the "Groundwater Treatment Standards for Discharges to Beaughton Creek" set forth in Table 4-2 before discharge to Beaughton Creek.

Groundwater Monitoring Respondents shall construct, operate and maintain a groundwater monitoring system sufficient to detect any contaminant migration outside of and below the DNAPL Zone. Respondents shall analyze monitoring data and compare this information to existing Site groundwater transport models on the behavior of the slurry wall and containment area to determine if evidence exists of containment zone failure. Respondents shall include an evaluation of the slurry wall's containment effectiveness in its annual report.

Respondents shall construct, operate and maintain a groundwater monitoring system to detect pooling of DNAPLs within the DNAPL zone.

4.1.9 Component 5: Surface Water

Surface Water Management System The Respondents shall capture and treat surface water run off at the Site to the standards specified in the ROD Amendment (Table 4-2) to prevent exposure and or possible run-off of contaminants into Beaughton Creek.

Site grading Respondents shall grade surface slopes to facilitate collection of surface water.

Stormwater Ponds Respondents shall install a system of three stormwater ponds and two 500,000 gallon tanks to provide storage areas for stormwater that requires treatment in the Baxter Water Treatment Plant. No leachate (RCRA cell, soil staging and fixation area) shall discharge to any of the stormwater ponds or 500,000 gallon tanks.

4.1.10 Component 6: Ditch Sediments

Respondents shall post signs in areas where contaminants in ditch sediment exceed Sediment Cleanup Standards in Table 4-2 of the ROD Amendment.. Respondents shall monitor ditch sediments to evaluate whether the standards in Table 4-2 are being met via natural attenuation. Within 5 years of the date of this Order, Respondents shall submit a report evaluating the success of degradation on sediment contaminants and whether performance standards have been met.

4.1.11 Component 7: Beaughton Creek

Respondents shall perform sampling of water quality and sediment before construction begins, and during construction after a rainfall event occurs to determine if surface water runoff is carrying contaminants into Beaughton Creek.

The Respondents shall conduct semi-annual monitoring of surface water in Beaughton Creek,

and yearly sediment samples. The Respondents shall develop and implement a sampling and analysis plan, that includes but is not limited to the portion of the Creek that runs through the Site. Respondents shall sample and evaluate Lake Shastina for Site contaminants to determine if Site contaminants were possibly carried downstream as required by EPA.

4.1.12 Component 8: Dust Control/Air Monitoring

Air Monitoring The Respondents shall evaluate and implement dust control measures that will prevent emissions of visible dust from the J.H. Baxter facility during operational activities and implementation of the Remedial Action in accordance with the Interim Dust Control Plan. Implementation of dust control measures shall not be performed in a manner that would interfere with surface water control measures implemented at the site.

Site Security The Respondents shall maintain a fence around the perimeter of the Site to prevent access and vandalism. Respondents shall post warning signs at 200 foot intervals along the fence and at all gates. The warning signs shall advise that the area is hazardous due to chemicals in the soils and groundwater which pose a risk to public health through direct contact with the soils and groundwater. The signs shall also provide a telephone number to call for further information. This phone will be dedicated to questions regarding the J.H. Baxter Superfund Site (see section 3.1.5).

During construction of the slurry wall Respondents shall post a guard at the Site providing 24 hours a day security to prevent access and vandalism. Respondents shall install the following special security measures at the RCRA cell and soils staging and fixation area: a minimum six-foot fence around the perimeter and signs warning that the area is hazardous due to chemicals in the soils which pose a risk to health through direct contact with the soils and allowing restricted access by designated personnel only.

4.1.7 Component 9: Access and Institutional Controls

4.1.7.1 With respect to any property owned or controlled by a Respondent that is located within the Site, within 15 days after the effective date of the Order, the Owner Respondent shall submit to EPA for review and approval a notice to be filed with the Recorder's Office, Siskiyou County, State of California, which shall provide notice to, including but not limited to, all successors-in-title, that the property is part of the Site, that EPA selected a remedy for the Site on September 27, 1990, and amended this remedy on March 27, 1998, and EPA issued an Order requiring implementation of the remedy. Such notice shall identify the Order number and the date that the Order was issued by EPA and shall identify the land use restrictions set forth in paragraph 4.1.7.5. The Owner Respondents shall record the notice within 10 days of EPA's approval of the notice. The Owner Respondents shall provide EPA with a certified copy of the recorded notice within 10 days of recording such notice.

4.1.7.2 At least 60 days prior to the conveyance of any interest in property located within the Site including, but not limited to, fee interests, leasehold interests, and mortgage interests, the Owner Respondents conveying the interest shall give the grantee, lessee and/or mortgage interest holder, written notice of this Order and specific notice of the land use restrictions set forth in paragraph 4.1.7.5. At least 60 days prior to such conveyance, the Owner Respondents conveying the interest shall also give written notice to EPA and the State of the proposed conveyance, including the name and address of the grantee, lessee, and/or mortgage interest holder and the date on which notice of the Order was given to the grantee, lessee, and/or mortgage interest holder. At least 60 days prior to such conveyance, the Owner Respondents shall offer the State a negative easement or restrictive covenant with the land use restrictions set forth in paragraph 4.1.7.5 in a form approved by EPA. The State may accept or deny such

a negative easement or restrictive covenant.

4.1.7.3 In the event of any such conveyance, the Owner Respondents' obligations under this Order, including, but not limited to, its obligation to provide or secure access and institutional controls, as well as to abide by such institutional controls pursuant to paragraph 4.1.7.5, shall continue to be met by the Owner Respondents. In no event shall the conveyance release or otherwise affect the liability of the Owner Respondent to comply with all provisions of this Order.

4.1.7.4 Respondents shall allow EPA and its authorized representatives and contractors to enter and freely move about all property at the Site and off-Site areas subject to or affected by the work under this Order or where documents required to be prepared or maintained by this Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondents and their representatives or contractors pursuant to this Order; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting tests as EPA or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to EPA by Respondents. Respondents shall allow EPA and its authorized representatives to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Order. Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under Federal law. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the state without further notice to the Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

4.1.7.5 Respondents shall refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial measures to be implemented pursuant to this Order. Owner Respondents shall:

i) prohibit residential uses, including mobile home, single/multi family home, factory built housing, hospitals, public or private schools, day care centers and similar uses;

ii) prevent access to and use of groundwater in the DNAPL Zone and other areas with concentrations of contaminants that exceed the Aquifer Cleanup Standards set forth in Table 4-2 of the ROD Amendment at the Site (with the exception of the remediation of groundwater);

iii) prevent exposure to waste left in the DNAPL Zone; and

iv) prohibit activities that would disturb the integrity of the remedy, including appropriate prohibitions on activities that would disturb the soil and/or any cap placed upon such soil, seeps, slurry wall and RCRA equivalent disposal cell, unless approved in advance and in writing by EPA.

4.2 Remedial Design

Respondents have submitted and EPA has approved the following Remedial Design deliverables: 100% Remedial Design Report Ground Water/ Slurry Wall Remediation System, 100% Remedial Design Proposed Bioventing System Area B Soils and the Design for Stormwater Pond #1. Respondents have been submitted the following plans to EPA for review and approval:

Remedial Action Work Plan Ground Water/ Slurry Wall Remediation System,
Draft Operations and Maintenance Plan Ground Water/ Slurry Wall Remediation System,
Remedial Action Workplan Surface Soils and Ditch Sediments,
Remedial Design Report Surface Soils and Ditch Sediments,
Postclosure Operations and Maintenance Plan Surface Soils, Area B and Ditch Sediments,
Monitoring Confirmation Sampling Plan; Surface soils, Area B and Ditch Sediments,
Monitoring Confirmation Sampling Plan Ground Water/ Slurry Wall Remediation System
Site- Wide Quality Assurance Project Plan,
90% Health & Safety Plan for Soil and Groundwater Remedial Action

In the specifications of the Final Design, Respondents shall identify the contractor(s) responsibilities while on-Site and special requirements such as communication procedures, health and safety precautions and quality control procedures.

Respondents shall implement the plans in 4.2 as approved by EPA.

4.3 Remedial Action

4.3.1 Remedial Action Work Plan

The Respondents shall submit Remedial Action (RA) Work Plans which includes a detailed description of the remediation and construction activities. The RA Work Plans shall include a project schedule for each major activity and submission of deliverables generated during the Remedial Action. The Respondents shall submit Remedial Action Work Plans in accordance with § IX of the UAO and the schedule set forth in Section 5.0.

4.3.2. Remedial Action Construction

The Respondents shall implement the Remedial Action as detailed in the approved Final Design. The following activities shall be completed in constructing the Remedial Action.

A. Preconstruction inspection and meeting:

The Respondents shall participate with the U.S. EPA and the State in a preconstruction inspection and meeting to:

a. Review methods for documenting and reporting inspection data;

b. Review methods for distributing and storing documents and reports;

c. Review work area security and safety protocol;

d. Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and,

e. Conduct a Site walk-around to verify that the design criteria, plans, and specifications are

understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by a designated person and minutes shall be transmitted to all parties.

B. Prefinal inspection:

Within 5 days after Respondents make preliminary determination that construction is complete, the Respondents shall notify the U.S. EPA and the State for the purposes of conducting a prefinal inspection. The prefinal inspection shall consist of a walk-through inspection of the entire Facility with U.S. EPA. The inspection is to determine whether the project is complete and consistent with the contract documents and the Remedial Action. Any outstanding construction items discovered during the inspection shall be identified and noted. Additionally, treatment equipment shall be operationally tested by the Respondents. The Respondents shall certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting shall be completed where deficiencies are revealed. The prefinal inspection report shall outline the outstanding construction items, actions required to resolve items, completion date for these items, and a proposed date for final inspection. This report can be in the form of a punch list or letter.

C. Final inspection:

Within 30 days of the prefinal inspection, the Respondents shall notify the U.S. EPA and the State for the purposes of conducting a final inspection. The final inspection shall consist of a walk-through inspection of the Facility by U.S. EPA and the Respondents. The prefinal inspection report shall be used as a checklist with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that outstanding items have been resolved.

D. Reports

1. Construction Complete Report

Within 30 days of a successful final inspection, Respondents shall submit a Construction Completion Report in accordance with Close Out Procedures for National Priorities List Sites OSWER Directive 9320.2-09 August, 1995. In the report, a registered professional engineer and the Respondents' Project Coordinator shall state that the Remedial Action has been constructed in accordance with the design and specifications. The written report shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of a Respondent or the Respondents' Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4.4 Operation and Maintenance

The Respondents shall prepare an Operation and Maintenance (O&M) Plan to cover both implementation and long term maintenance of the Remedial Actions. An initial Draft O&M Plan shall be submitted as a final Design Document submission. The final O&M Plan shall be submitted to U.S. EPA prior to the pre-final construction inspection, in accordance with the approved construction schedule. The plan shall be composed of the following elements:

1. Description of normal operation and maintenance;

   a. Description of tasks for operation;
   b. Description of tasks for maintenance;
   c. Description of prescribed treatment or operation conditions; and
   d. Schedule showing frequency of each O&M task.

2. Description of potential operating problems;

   a. Description and analysis of potential operation problems;
   b. Sources of information regarding problems; and
   c. Common and/or anticipated remedies.

3. Description of routine monitoring and laboratory testing;

   a. Description of monitoring tasks;
   b. Description of required data collection, laboratory tests and their interpretation;
   c. Required quality assurance, and quality control ;
   d. Schedule of monitoring frequency; and
   e. Description of verification sampling procedures if Cleanup or Performance Standards are exceeded in routine monitoring.

4. Description of alternate O&M;

   a. Should systems fail, alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and the environment or exceed performance standards; and
   b. Analysis of vulnerability and additional resource requirement should a failure occur.

5. Corrective Action;

   a. Description of corrective action to be implemented in the event that cleanup or performance standards are exceeded; and
   b. Schedule for implementing these corrective actions.

6. Safety plan;

   a. Description of precautions, of necessary equipment, etc., for Site personnel; and
   b. Safety tasks required in event of systems failure.

7. Description of equipment; and

   a. Equipment identification;
   b. Installation of monitoring components;
   c. Maintenance of Site equipment; and
   d. Replacement schedule for equipment and installed components.

8. Records and reporting mechanisms required.

   a. Daily operating logs;
   b. Laboratory records;
   c. Records for operating costs;
   d. Mechanism for reporting emergencies;

e. Personnel and maintenance records; and
f. Monthly/annual reports to State agencies.

4.5 Performance Monitoring

Performance monitoring shall be conducted to ensure that all Performance Standards are met.

A. Performance Standard Verification Plan

The purpose of the Performance Standard Verification Plan is to provide a mechanism to ensure that both short-term and long-term Performance Standards for the Remedial Action are met. Once approved by EPA, Respondents shall implement the Performance Standards Verification Plan on the approved schedule. The Performance Standards Verification Plan shall include:

1. Quality Assurance Project Plan
2. Health and Safety Plan
3. Field Sampling Plan

B. Performance Standard Verification Report

Respondents shall submit this Report when construction has been completed and performance standards have been attained for all Remedial Action components.

4.6 Five Year Review.

The Respondents shall conduct the requisite studies, investigations, or other response actions as determined necessary by EPA in order to permit EPA to conduct the review under section 121(c) of CERCLA. As a result of any review performed under this paragraph, Respondents may be required to perform additional Work or to modify Work previously performed.

5.0 Deliverables and Schedules

A summary of the project schedule and reporting requirements contained in this SOW is presented below:

Deliverables		Due Date
	Ground Water/ Slurry Wall Remediation System	
1.	Final RA Work Plan	Thirty (30) days after EPA comments on Draft Remedial Action Work Plan
2.	Final Operations and Maintenance Plan	Thirty (30) days after EPA comments on Draft Operations and Maintenance Plan
3.	Performance Standard Verification Plan	Thirty (30) days from the effective date of this Order
4.	Pre-Construction Inspection and Meeting	March 17, 1999
5.	Pre-Construction Meeting Report	15 days after Pre-Construction Meeting

6.	Initiate Construction of RA	Fifteen (15) days after Pre-Construction Inspection and meeting
7.	Prefinal Inspection	August 6, 1999
8.	Prefinal Inspection Report	15 days after completion of prefinal inspection
9.	Final Inspection	30 days after prefinal inspection
10.	Construction Complete Report	30 days after final inspection

Remediation of Contaminated Soils

1.	Final RA Work Plan	Thirty (30) days after EPA comments on Draft Remedial Action Work Plan
2.	Operations and Maintenance Plan	Thirty (30) days after EPA comments on Draft Operations and Maintenance Plan
3.	Performance Standard Verification Plan Verification Plan	Thirty (30) days after EPA comments on Draft Performance Standard
4.	Pre-Construction Inspection and Meeting	February 15, 2000
5.	Pre-Construction Meeting Report	15 days after Pre-Construction Meeting
6.	Initiate Construction of RA	Fifteen (15) days after Pre-Construction Inspection and meeting
5.	Prefinal Inspection	December 2, 2000
7.	Prefinal Inspection Report	15 days after completion of prefinal inspection
8.	Final Inspection	30 days after prefinal inspection
9.	Construction Completion Report	30 days after final inspection

Site Wide

1.	Construction Complete Report	30 days after construction and demobilization of entire Site

2.	Any delay in deliverable	Communication within 48 hours
3.	Written notice that Respondents will comply with the terms of this order	Within 5 days of the effective date of this Order
4.	Notification of Project Coordinator	Within 10 days of the effective date of this Order
5.	Submit name, title, and qualifications of any construction contractors proposed	Within 10 days of the effective date of this Order
6.	Letter stating that no records have been tampered with	Within 10 days of the effective date of this Order
7.	Proof of insurance (Respondent and Contractor)	Within 10 days of the effective date of this Order
8.	After O & M is completed a written report by a registered engineer.	30 days after O & M is completed
9.	Proof of ability to pay after RD approval. If to be paid by 3rd party proof must be resubmitted annually on anniversary of the day this order became effective.	Within 30 days of the effective date of this Order
10.	Construction Updates	Weekly during construction
11.	Progress Reports	Monthly
12.	Annual Reports	Annually
13.	Evaluation of Existing Information- a letter listing all Design documents still pending to be submitted to EPA	Within 15 days of the effective date of this Order
14.	Completion of Remedial Action Report	See paragraph 37 of the Order
15.	Completion of Work Report	See paragraph 38 of the Order
16.	Submit Land Use Restriction Notice to EPA for review and approval	Within 15 days of the effective date of this Order
17.	Record Land Use Restriction Notice	Within 10 days of EPA approval of Notice
18.	Send EPA a certified copy of recorded notice	Within 10 days of recorded notice

Attachment 4

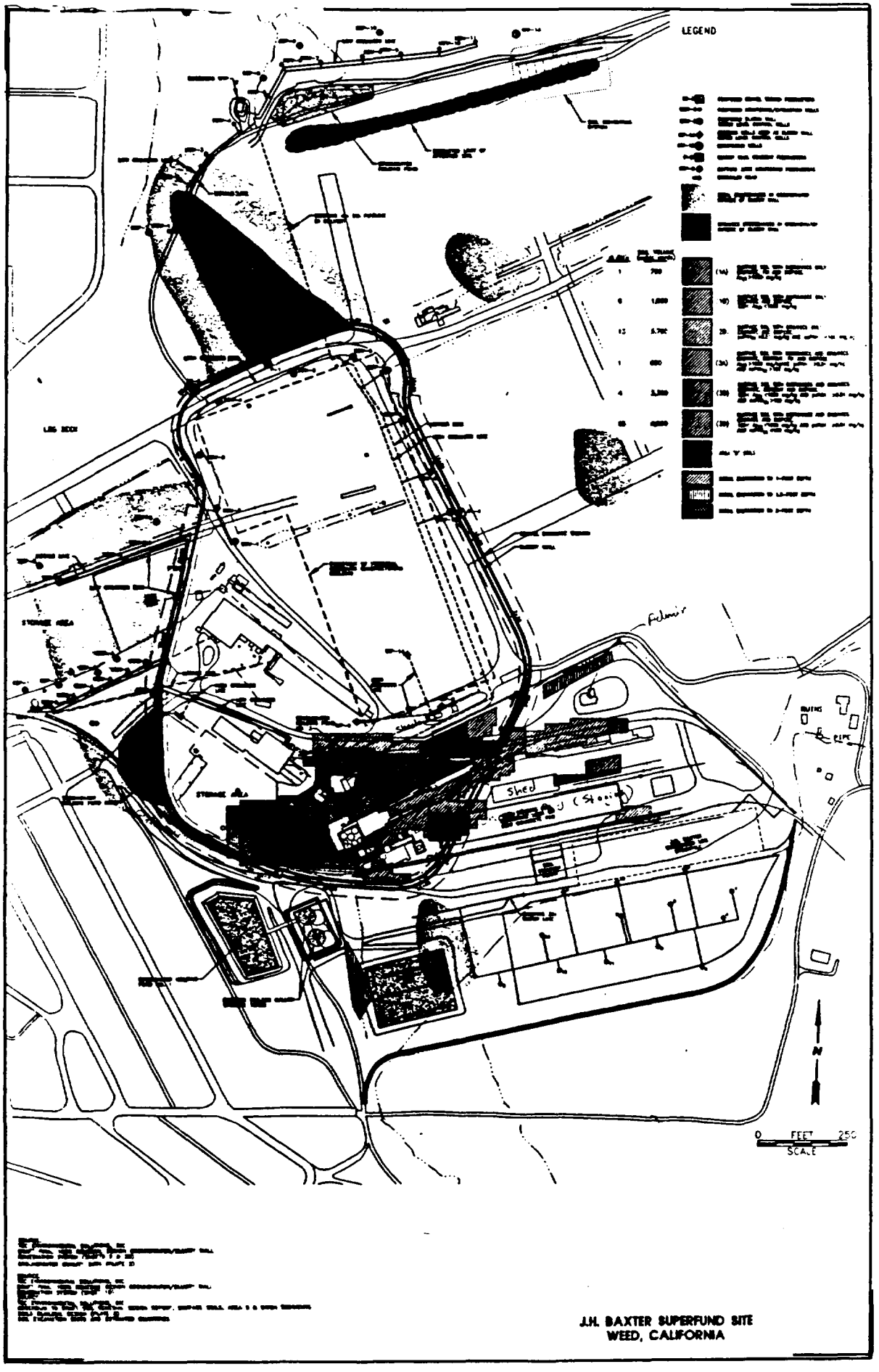

Table 4-2
Excavation and Treatment Standards in the ROD as Modified by the ROD Amendment

	Amended ROD Standards			
CONSTITUENTS OF CONCERN (COC)	SURFACE SOIL EXCAVATION STANDARDS (mg/kg)	SUBSURFACE SOIL EXCAVATION STANDARDS[1]	SEDIMENT CLEANUP STANDARDS (NATURAL ATTENUATION) (mg/kg)	TREATMENT STANDARDS FOR SOILS PLACED IN RCRA-EQUIVALENT CELL[2] (mg/l)
Arsenic	8	5 (TCLP) (mg/l)	8	5 (TCLP)
Chromium	500	5 (STLC) (mg/l)	18	5 (STLC)
Copper	2,500	25 (STLC) (mg/l)	Not present in sediment	25 (STLC)
Zinc	5,000	250 (STLC) (mg/l)	26	250 (STLC)
Pentachlorophenol (PCP)	17	7.4 (mg/kg)	1.0	1.7 (STLC)
Tetrachlorophenol	2,800	Not present in subsurface soil	1.0	1.0 (TCLP)
Carcinogenic PAHs (cPAH)[3]	0.51	3.4 (mg/kg)	0.5	0.005 (TCLP)
Non-carcinogenic PAHs (ncPAH)[4]	43,000	3.4 (mg/kg)	0.5	1.0 (TCLP)
Dioxins	0.001	0.001 (mg/kg)	Not present in sediment	0.001 (TCLP)
Furans	0.001	0.001 (mg/kg)	Not present in sediment	0.001 (TCLP)

Table 4-2 (Continued)
Excavation and Treatment Standards in the ROD as Modified by the ROD Amendment

	Amended ROD Standards		
CONSTITUENTS OF CONCERN (COC)	TREATMENT STANDARDS FOR AREA B[5] (mg/kg)	AQUIFER CLEANUP AND GROUNDWATER TREATMENT STANDARDS (mg/l)	GROUNDWATER TREATMENT STANDARDS FOR DISCHARGES TO BEAUGHTON CREEK (mg/l)
Arsenic	Not a COC for Area B soil	0.005	0.005
Chromium	Not a COC for Area B soil	0.008	0.005
Copper	Not a COC for Area B soil	0.011	0.005
Zinc	Not a COC for Area B soil	0.090	0.010
Benzene	Not present in Area B soil	0.001	0.001
Pentachlorophenol	7.4	0.001	0.0003
Tetrachlorophenol	Not present in Area B soil	1.1	0.0004
Carcinogenic PAHs (cPAH)	3.4	0.005	0.001
Non-Carcinogenic PAHs (ncPAH)	3.4	0.005	0.001
Dioxins	0.001	2.5×10^{-8}	2.5×10^{-8}
Furans	0.001	Not present in groundwater	Not present in groundwater

Table 4-2 (Continued)
Excavation and Treatment Standards in the ROD as Modified by the ROD Amendment

Abbreviations:

cPAH – carcinogenic PAH
COC – Constituents of Concern
ncPAH – noncarcinogenic PAH
PAH – polynuclear aromatic hydrocarbon
ppm – parts per million
ROD – Record of Decision
STLC – Soluble Threshold Limit Concentration
TCLP – Toxicity Characteristic Leaching Procedure

Notes:

1) There will be no excavation of subsurface soils in the Tl zone.
2) Standard tests will be modified by the use of deionized water as the leaching solution rather than a citric acid buffer.
3) cPAHs: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene
4) ncPAHs: Naphthalene, 2-methylnaphthalene, Acenaphthylene, Acenapththene, Dibenzofuran, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(ghi)perylene
5) If *in situ* bioventing of Area B soils is not successful, soils will be excavated and treated to the soil treatment standards, and disposed of in a RCRA-equivalent cell. If *in situ* bioventing is capable of achieving the treatment standards, the Area B soils will be left in place after treatment has been completed. Area B soils which do not meet the surface soil excavation standard will be covered with 2 feet of clean soil and left in place after treatment has been completed.